

Claims

Sub E<sup>2</sup>  
1. A nucleoside 5'-phosphate having a removable blocking moiety protecting the 3' position which is a hydrocarbonyl wherein said removable blocking moiety is 5 linked to the 3' carbon of said nucleoside 5'-triphosphate.

2. A nucleoside 5'-phosphate having a removable blocking moiety protecting the 3' position which is selected from the group consisting of esters, ethers, 10 carbonitriles, phosphates, carbonates, carbamates, borates, nitrates, sugars, phosphoramidates, phenylsulfonates, sulfates, sulfones, wherein said removable blocking moiety is linked to the 3' carbon of said nucleoside 5'-triphosphate.

Sub E<sup>3</sup>  
3. A nucleoside 5'-phosphate having a removable blocking moiety protecting the 3' position which is selected from the group consisting of esters, ethers and phosphates, wherein said removable blocking moiety is 20 linked to the 3' carbon of said nucleoside 5'-triphosphate.

Sub H  
C<sup>1</sup>  
4. A nucleoside of 5'-phosphate of claims 1-3 wherein said nucleoside contains a base selected from the group consisting of adenine (A), guanine (G), thymine (T), cytosine (C) and uracil (U).

25 5. A nucleoside 5'-phosphate of claims 1-4 wherein said nucleoside 5'-phosphate is a nucleoside 5'-triphosphate.

6. A nucleoside 5'-phosphate of claims 1-5

wherein said removable blocking moiety is enzymatically removable.

7. A nucleoside 5'-phosphate of claim 6 wherein said removable blocking moiety is removed in under 5 10 minutes.

8. A nucleoside 5'-phosphate of claims 1-7 wherein said removable blocking moiety is linked to a solid support.

*add  
G<sup>2</sup>*